

# Bemidji State University

## MATH 3066: Geometry and Technology in the Mathematics Classroom

### A. COURSE DESCRIPTION

Credits: 4

Lecture Hours/Week: \*.\*

Lab Hours/Week: \*.\*

OJT Hours/Week: \*.\*

Prerequisites: None

Corequisites: None

MnTC Goals: None

This course examines the concepts of patterns, shape and space; spatial sense; plane, solid, and coordinate geometry systems; generalizing geometric principals; limits, derivatives and integrals; and appropriate use of technology in the classroom. Prerequisites: MATH 1011 or equivalent or consent of instructor; (Might not be offered every year.)

**B. COURSE EFFECTIVE DATES:** 01/13/2014 - Present

### C. OUTLINE OF MAJOR CONTENT AREAS

1. Concepts of Patterns, Relations & Functions
2. Concepts of Shape & Space
3. Formal & Informal Argument
4. Geometry Systems
5. Motion
6. Structure and Systems of Measurement

### D. LEARNING OUTCOMES (General)

1. apply properties of boundedness and limits to investigate problems involving sequences and series.
2. apply concepts of derivatives to investigate problems involving rates of change.
3. study spatial sense and the ways in which shapes can be visualized, combined, subdivided, and changed to illustrate concepts, properties, and relationships.
4. measure, estimate, and use measurements to describe and compare geometric phenomena.
5. shape the ways in which shape and space can be derived and described in terms of dimension, direction, orientation, perspective, and relationships among these properties.
6. understand the structure of systems of measurement, including the development and use of measurement systems and the relationships among different systems.

### E. Minnesota Transfer Curriculum Goal Area(s) and Competencies

None

### F. LEARNER OUTCOMES ASSESSMENT

As noted on course syllabus

### G. SPECIAL INFORMATION

None noted